www.wvara.org

March 2018

The Heterodyne

Newsletter of the West Valley Amateur Radio Association

March Meeting

PARASET: A Clandestine Spy Radio of WWII and It's 21st Century Reincarnations

By Hiroki Kato, AH6CY

Wednesday, March 14
Meeting Starts at 7pm

Meeting Location:
American Red Cross,
Silicon Valley Chapter
2731 N. First Street at Plumeria Dr
(southwest corner) in San Jose

WVARA Repeaters (W6PIY)		
Band	**Frequency**	**PL**
6 Meters	52.580- MHz	151.4 Hz
2 Meters	147.39+ MHz	151.4 Hz
1.25 Meters	223.96- MHz	156.7 Hz
0.70 Meter	441.35+ MHz	88.5 Hz
0.23 Meter	1286.2- MHz	100 Hz

Club Net

WVARA's club net is on the W6PIY repeaters each Tuesday at 8:30 pm. All repeaters are linked together during the net. The net script can be found at www.wvara.org/net.html .

Visitors Are Welcome!

President's Letter

There are days where I look around at my (usually very messy) workbench and consider the impact ham radio has had on my life and how I am impacting ham radio.

How has ham radio affected each of you? The awe-inspiring event that is Field Day sparked me to get back in to the hobby and see what more it had to offer. It has not disappointed. The IOT aspects and digital mode ideas have started to leak through into my professional life, and I am doubling down on understanding the IP world in a way I certainly do not today. Has ARES/RACES involvement driven you to learn more? Has the downturn in propagation pushed you to learn more about space weather?

How have you affected ham radio? There are many rules that are important for us to follow – especially when it comes to safety. There are also many that are eligible to be evolved in a way that helps them catch up with the times. The recent evolution of the HF digital modes, skimmers, reverse beacon networks, APRS, and all the other things that have come into being recently has pushed the interpretation of rules (unmonitored transmissions) and established some new customs (like band planning). If you open that up to the last few decades, the rules have had to be wide enough to keep up with the evolving interests everyone has.

There is a saying about flight: Nobody flies a big airplane without first flying a small one. A similar view can be taken of ham radio. First, we each took a test to confirm we knew what a band and modulation mode was. Then, after a few years, here we are setting up APRS networks, involved in ARES/RACES operations, talking to a new friend in Belize, and trying to figure out how to get an AllStar repeater controller to work. That last part is big in ham radio… the “figure it out” part.

Our hobby is one of investigation and learning. We push the hobby and the hobby pushes us. Both sides are learning about each other and growing because of it. At the next club meeting, let us know about the ham radio projects that are pushing you or have brought cause to push the hobby around a bit. Bring in some show and tell and share your ideas. This is a great crew that has lots of ideas. You’ll likely come away with a few good ones that you wouldn’t have otherwise thought about.

73, Bobby K0XI

Meeting Topic

PARASET: A Clandestine Spy Radio of WWII and It’s 21st Century Reincarnations by Hiroki Kato, AH6CY

Hello Everyone!

It’s time for our March WVARA meeting. Please join us this Wednesday (March 14th) at 7 pm in Meeting Room 5 at the Silicon Valley Chapter of the American Red Cross, 2731 N. First Street at Plumeria Drive (southwest corner) in San Jose.

Our guest speaker for the evening is Hiroki Kato (AH6CY) who will tell us a story of a QRP spy radio of WWII: how it was developed and how it was used in the war against Nazi Germany. Hiroki delivered a similar talk at Pacificon this last year, and from what I hear, we’re in for a real treat.

Most of us come in through the side entrance on the southwest side of the building — look for our red WVARA sign on the side where they park all the Red Cross trucks. Cookies will be served, and of course, visitors are welcome!

If you haven’t been to the Red Cross, “talk-in” is usually available on the Association’s repeaters; 2m/220 are good choices, and our 6-meter machine is working pretty well these days I hear!

A few of us usually meet for dinner somewhere near the Red Cross around 6 pm prior to the meeting. ***** If this applies to you, please read: ***** This month, we’re going to take a small break from Dish’n’Dash and instead meet at Panera Bread located at 503 Coleman Avenue: https://www.yelp.com/biz/panera-bread-san-jose-2

Don’t worry, we’ll keep Dish’n’Dash in the rotation, but it’s not everyone’s favorite, and that’s fine.

Looking forward to seeing everyone!

73, Bill, W9KKN

CORRECTION: 1st Field Day Antenna Party on Saturday, March 31

Since the CQ WPX SSB Contest is in 2 weeks, we rescheduled our first antenna party to Saturday morning, March 31, in the Red Cross parking lot at 10 am.

We will assemble one of our modified Force12 10/15/20/40 yagis (which we used last year at Field Day and CQP.) The focus of this month's party will be to 1) confirm that we still have all the parts, 2) re-learn how to put it together, and 3) test the antenna to verify that nothing has changed since last year.

And don't forget to mark you calendar for this year's big event — Field Day weekend is June 22-24.

73, Jim K6EI

New Member

The following new members joined WVARA recently:

Steven Hood KM6PEA

Welcome!!!

FT8 Operating Tips by Bill Frantz, AE6JV

People getting started in FT8 operation, and those looking for more advice on operation, should look at an excellent collection of FT8 operating tips by Gary Hinson ZL2IFB, at http://www.g4ifb.com/FT8_Hinson_tips_for_HF_DXers.pdf. This page is particularly good at helping you get your computer and radio set up for FT8 operation.

The basic flow of FT8 transmission divides operation into 15 second time slots, called the even and odd slots. When making a QSO, you transmit during one slot and receive during the next. This division, and the strict clock synchronization required, mean that you will not see anyone else's transmissions during your transmission slot, which makes it hard to see if you and someone else are QRMing each other.

On the other hand, wsjt-x, currently the only program which supports FT8 operation, decodes all the signals it has received during a slot. On a busy band, 30 to 40 signals may be decoded. The program will highlight the signals that contain your call sign, and the ones sending CQ using different highlight colors for the stations you have logged and the ones you haven't. It uses yet another highlight color for DSCCs you haven't worked.

To split or not to split, that is the question

Because of these characteristics, FT8 works really well with split operation. Receiving split communication is automatic. wsjt-x will automatically move the receive frequency so transmissions with your call sign appear in the "RX Frequency" window, which gives a record of recent QSOs.

However, some operators aren't used to split, and perhaps are using narrow bandwidth filters in their receivers, and so will not recognize your signal when it is split from theirs, so much of the FT8 activity is in the classic mode of answer on the CQer's frequency.

Tail Ending - How to get more QSOs in a given amount of time

If you send the first message of your CQ response when you see the CQing station send RR73 or 73, then you both can save a turn around in completing the QSO. This works better with split operation, but can be used with simplex as well. Again, some people don't understand or like this shortcut, but it is useful to speed up contacts. If you are calling CQ, and want automatic operation to help with tail ending, click "Enable TX" immediately after you log the current QSO.

More ways to speed things up

Clicking the "One" box to the left of the standard messages will allow you to modify the messages. Double click message 1 to skip it, including sending your grid square -- good for speeding up DX contacts. Give your grid via LotW when you upload the contact. Double click message 4 to change RRR to RR73 saving a round when you are CQing.

Rapid transmit frequency change

Sometimes it is useful to be able to change frequency after you have started to transmit. If you can change it in the first second or two, the other end can still decode your transmission. To enable these changes, check the box in Preferences -> General -> Allow TX frequency change while transmitting.

Avoiding QRM

The biggest problem with operating FT8 is ensuring a clear transmit frequency. Looking at the band before choosing a transmit frequency is the first step. If you suspect QRM, it is possible to take a peek by halting transmission for a couple of seconds and then resuming by pressing "Halt TX" followed by "Enable TX" a second or two later. You may even be decoded since the receiver will see this as strong QSB (fading). When you are calling CQ and receive no answer stop the CQ for a brief time to make sure you have a clear frequency.

When you are calling CQ and can't decode reasonably strong signals on your transmission frequency, suspect QRM. Instead of just sending CQ, use the Free Msg to send something like "QRM PLS SPLIT" to let your callers know what the problem is.

There are a number of situations where some special actions will make everybody's life a bit better:

When stopping response to a CQ

If you've been sending a response to a CQ for several cycles and decide to quit, or you can't receive the station anymore, perhaps it's time to go on to some other station. Click "Enable Tx", and the transmission of your response will stop after the current, in progress, transmission completes. When it stops, click "R+dB" so you are primed to answer incase you finally receive a response. Just hover over the "Enable Tx" button, ready to click it if you get a response, until it is clear you won't get a response. This procedure enables you to smoothly continue a QSO you thought wasn't going to happen.

When someone calls you as you finish a QSO

Double click on the line with their transmission. The fields for their call, grid, and signal strength will be filled in. You will be in running mode (as if you called CQ), so your transmit frequency will not change. If you just finished responding on someone else's frequency, you should change your transmit frequency to avoid stepping on his run frequency. If you change frequency quickly enough, your transmission will just be a burst of noise, handled by the decoder of the station listening on the old frequency.

*End of a S&P QSO in bad condition*s

When you have responded to a CQ and the other operator has had difficulty receiving your transmissions, even though you have received his RRR, he may resend it waiting for your 73. Unless he is using the short form of RR73, he will not be prompted to log a qso until he receives your 73. Be prepared to resend the 73 after you start receiving his response by clicking the "73" button. Then if you get a RRR response again, just click the "Enable Tx" button to resend it. Giving him the prompt to log the transmission makes it much more likely you'll be in his log.

Receiving when the other station is very strong

If the trace is pure red in the waterfall, cutting the RF gain can help with decode, moving the signal to a more linear portion of the audio input. The RF gain control is the best way to control the signal levels going into the wsjt-x computer. Some people even run with AGC off for the increased control that offers.

With good luck you can make a lot of contacts while running search and pounce. Here is an example:

```
204530 -18  0.2  898 ~  CQ K4SBZ EM70
204545  Tx       898 ~  K4SBZ AE6JV CM97
204600 -19  0.1  900 ~  AE6JV K4SBZ -03
204615  Tx       898 ~  K4SBZ AE6JV R-19
204630 -21  0.1  902 ~  AE6JV K4SBZ RRR
204645  Tx       898 ~  K4SBZ AE6JV 73
204700 -19 -0.0  809 ~  CQ KB8CMW EM89
204715  Tx       809 ~  KB8CMW AE6JV CM97
204730 -18 -0.1  803 ~  CQ KB8CMW EM89
204745  Tx       809 ~  KB8CMW AE6JV CM97
204800 -14 -0.1  798 ~  AE6JV KB8CMW -04
204815  Tx       809 ~  KB8CMW AE6JV R-14
204830 -11 -0.1  796 ~  AE6JV KB8CMW RRR
204845  Tx       809 ~  KB8CMW AE6JV 73
204900 -15 -0.1  796 ~  AE6JV KB8CMW 73
204900   5  0.1 1516 ~  CQ NA9L EM69
204915  Tx      1516 ~  NA9L AE6JV CM97
204930   5  0.2 1517 ~  AE6JV NA9L +01
204945  Tx      1516 ~  NA9L AE6JV R+05
205000   4  0.1 1517 ~  AE6JV NA9L RRR
205015  Tx      1516 ~  NA9L AE6JV 73
205030  -2  0.1 1518 ~  AE6JV NA9L 73
205045 -10  0.1 1740 ~  CQ KF4RWA EM63
205100  Tx      1740 ~  KF4RWA AE6JV CM97
205115 -10  0.1 1741 ~  AE6JV KF4RWA -19
205130  Tx      1740 ~  KF4RWA AE6JV R-10
205145  -7  0.1 1742 ~  AE6JV KF4RWA RRR
205200  Tx      1740 ~  KF4RWA AE6JV 73
205215  -7  0.2 1742 ~  AE6JV KF4RWA 73
205215 -16  0.1 1074 ~  CQ K8TS EN72
205230  Tx      1074 ~  K8TS AE6JV CM97
205245 -14  0.1 1074 ~  AE6JV K8TS -08
205300  Tx      1074 ~  K8TS AE6JV R-14
205315 -14  0.1 1075 ~  AE6JV K8TS RRR
205330  Tx      1074 ~  K8TS AE6JV 73
205345  -9  0.1 1075 ~  AE6JV K8TS 73
205345 -11  0.1  914 ~  CQ KJ4RWD EM60
205401  Tx      1017 ~  KJ4RWD AE6JV CM97
```

```
205415 -10  0.2  914 ~  AE6JV KJ4RWD -01
205430  Tx      1017 ~  KJ4RWD AE6JV R-10
205445  -4  0.1  914 ~  AE6JV KJ4RWD RRR
205500  Tx      1017 ~  KJ4RWD AE6JV 73
205515  -5  0.1  914 ~  AE6JV KJ4RWD 73
205515 -11  0.5 1060 ~  CQ KM4KLP EM50
205530  Tx      1017 ~  KM4KLP AE6JV CM97
205545 -12  0.6 1060 ~  AE6JV KM4KLP -09
205600  Tx      1017 ~  KM4KLP AE6JV R-12
205615   0  0.6 1059 ~  AE6JV KM4KLP RRR
205630  Tx      1017 ~  KM4KLP AE6JV 73
205715  -2  0.6 1058 ~  VE5RS KM4KLP -07
```

Elapsed time: 7 stations in 13 minutes

WVARA Net Check-Ins (W6PIY)

Tuesdays at 8:30 PM

Call Sign	**Name**	**2/13/18**	**2/20/18**	**2/27/18**	**3/6/18**
Total		**19**	**15**	**11**	**15**
AE6JV	Bill	X	X		X
AF6AE	Bill	X	X	X	
AG6YO	Kevin	X	X		
AI6NT	Henry			X	X
K0FRG	Bob				X
K0XI	Bobby	X			
K6BRF	Bert	X			
KC6ZKT	Steve	X			
KD6VOR	Marv	X			
KE6MT	Rex	X	X	X	X
KF6EMB	Svend	X	X	X	X
KG6AF	Bob		X		
KI6SLX	Peri	X	X		X
KJ6CQJ	Dean	X			
KJ6GMO	Sue	X			
KJ6WH	Brian	X	X		X
KJ6ZZI	Michael	X	X	X	X
KK6VF	Kevin	NET	NET		NET
KM6DAC	Cameron				X
KM6PEA	Steve	X	X	X	X
N6FYR	Matt			X	
N9CU	Andy		X	X	
W6IA	Mark	X	X	X	X
W6PK	Phil	X			X
W9KKN	Bill		X		X
WB6KHP	Dave	X	X	NET	X
WR3K	Greg			X	

My Mini-DXpedition to KH6-Land

By Jim Peterson, K6EI

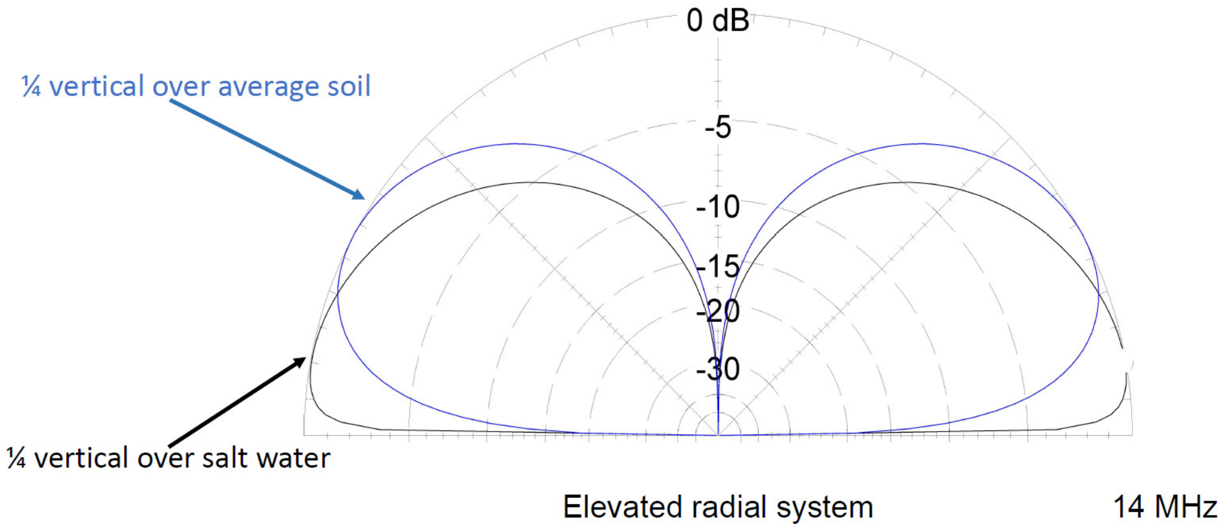
There's no need to travel with the next DXpedition to Bouvet in order have a radio adventure of your own. Here's a summary of my personal mini-DXpedition to Hawaii's Big Island where I had a boatload of fun and learned a bit more about the effectiveness of low power when combined with a vast expanse of salt water.

I've always been fascinated by QST's monthly "How's DX" column dating back to when I was in high school and first getting started in ham radio. Even the column's past masthead, with its graphic of a grass hut on a tropical island with a ladderline-fed dipole, inspired me to dream about someday packing my gear and heading out to experience a tropical radio adventure of my own.

Last year I purchased and assembled a highly-portable Elecraft KX3 HF transceiver, and the concept of going on a mini DXpedition went from hypothetical to feasible. Then, a few months ago my day dream shifted from merely feasible to total reality when my daughters suggested that our family spend this Christmas break on Hawaii. While they were thinking of snorkeling and sunning on the beach, my thoughts immediately went to a portable KH6 QRP station next to an infinite salt water ground plane. While my primary goal would be to spend quality time with my family during our vacation, I figured I might be able to sneak in a few hours of radio time during our travels. A quick review of the checkbook revealed that we had enough cash to cover the trip, and so we made plans for a one-week stay.

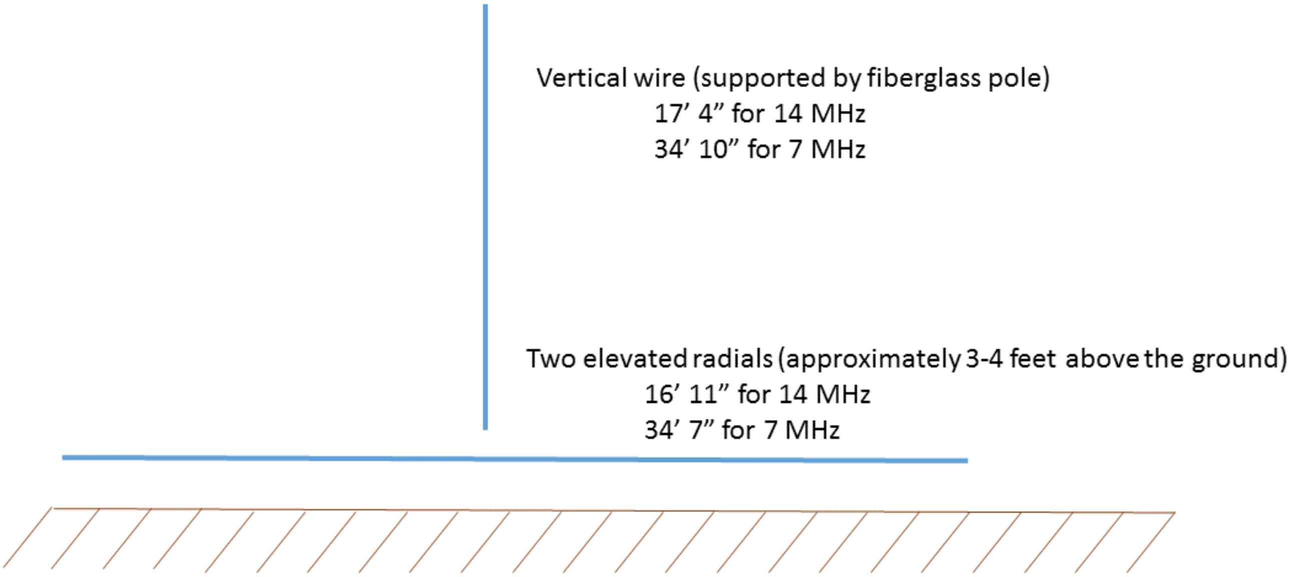
My Portable Antenna – A Basic Quarter-Wavelength Vertical

This trip was my opportunity to see for myself what a simple antenna and low power could do when situated on a sandy beach next to a vast expanse of open ocean. Any antenna that I chose would need to be light and compact to qualify as a carry-on for the flight, as well as quick-and-easy to install, efficient, and low-profile. In addition, my portable antenna needed to be capable of maximizing the amount of energy radiated at low elevation angles for DX propagation, since this minimized the number of hops between the earth and the ionosphere. Vertically-polarized antennas have a natural advantage when it comes to emissions at low elevation angles, and a vertically-polarized antenna adjacent to salt water has a particularly excellent reputation for low angle radiation performance. I have an MFJ telescoping fiberglass mast that can be extended to 33 feet, and so a quarter-wavelength vertical with a pair of elevated radials was the logical choice. I decided to pre-tune a set of antenna wires for 20 meters (primarily for daytime use) and a second set for 40 meters (for nighttime operation).

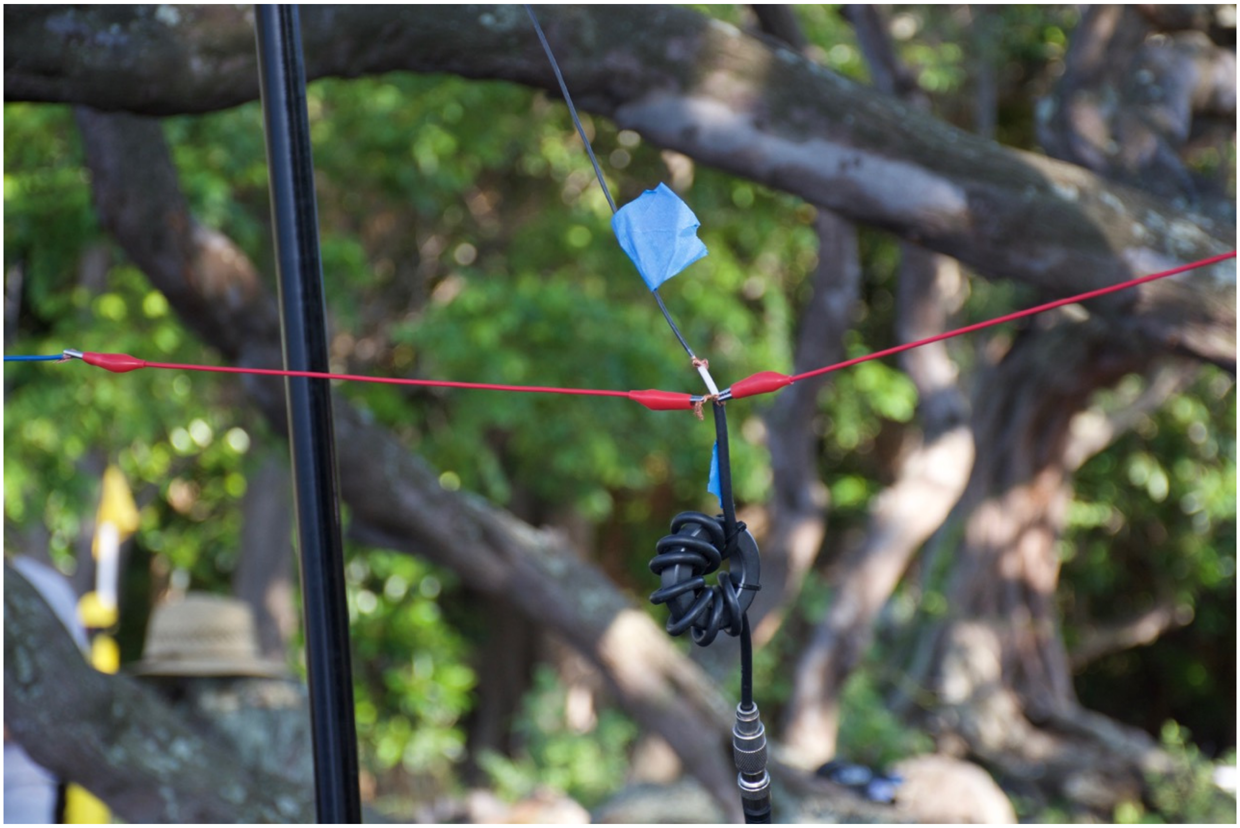


Elevation radiation patterns generated using EZNEC for a ground-mounted quarter-wavelength vertical monopole when the soil conductivity is average (blue trace) and when the vertical is adjacent to highly-conductive salt water (black trace). Vertical polarization above salt water provides superior propagation at elevation angles below 15 degrees -- ideal for long range communications.

In preparation for the trip I spent an hour in a nearby park assembling and tuning the quarter-wavelength wires. The first step was to prune the two elevated radials to resonance in the CW portion of 20 meters -- perfect for a brass pounder like me. This was accomplished by temporarily mounting the two radials about 3 feet above the ground and connecting the two wires to a coaxial feed as if they were forming a very low horizontal dipole. Using an antenna analyzer, I then pruned the two wires until the SWR was minimized. The second step was connect the vertical wire (supported by the telescoping fiberglass mast) to the center lead of the coaxial feed with the two elevated radials now connected to the cable's outer braid. After a few adjustments, the antenna produced an SWR below 1.2:1 at the desired frequency. The last step was to repeat the whole process for a second wire assembly tuned to 7 MHz.


Vertical wire (supported by fiberglass pole)
17’ 4” for 14 MHz
34’ 10” for 7 MHz
Two elevated radials (approximately 3-4 feet above the ground)
16’ 11” for 14 MHz
34’ 7” for 7 MHz

Wire dimensions of my portable quarter wavelength vertical (tuned for the CW portion of each band)

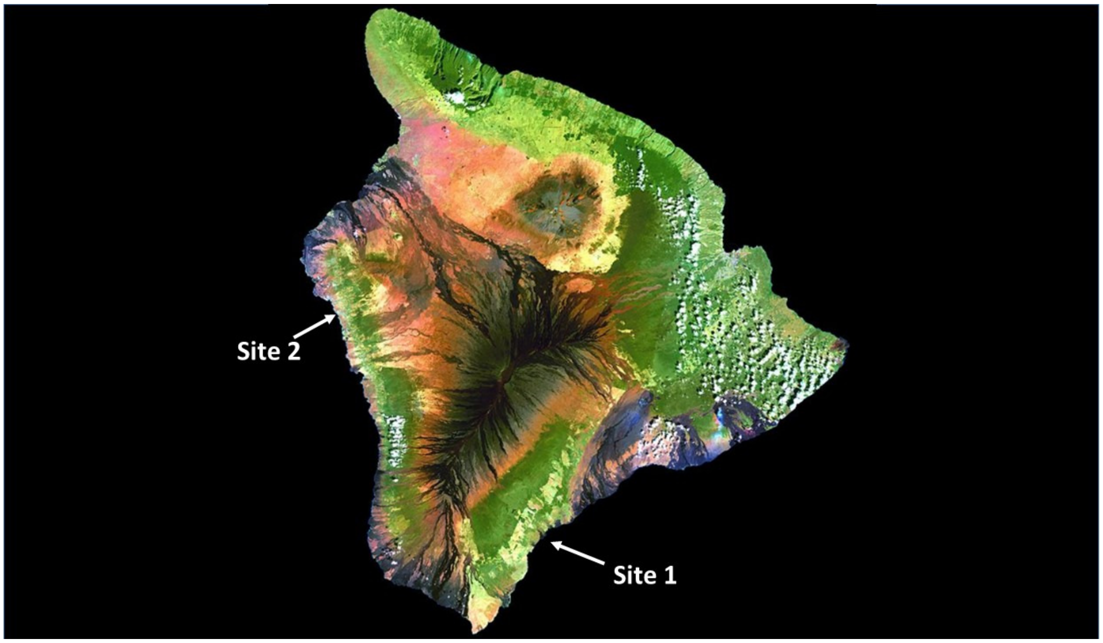


The feedpoint of the quarter-wavelength vertical has a toroid-based RF choke to minimize common-mode current on the coaxial feed. (Note the alligator clips that made it easy to swap between the 20- and 40 meter antenna wires.

Once the 20- and 40-meter wire antennas were tuned, tested and ready, I packed my transceiver and two 20-foot lengths of RG-8X coaxial cable along with the collapsed fiberglass pole and the antenna wires. I also packed a pair of noise-cancelling headphones in anticipation of crashing surf and wind.

Airlines no longer allow the transport of external batteries, so Plan A was to rely on the eight rechargeable AA-batteries that were internal to the KX3. (I packed a battery charger so that I could recharge the eight batteries each evening.)

The Adventure Begins



The first half of my mini-DXpedition was on the south side of the Big Island, with the second half of my stay on the more-populous west side near Kona[1].

The first half of our vacation was on the southeast side of the Big Island near Pahala. This part of the island is fairly unpopulated except for the occasional coffee plantation. We were staying a couple miles inland at what used to be a sugar plantation – very peaceful, but with lots of mosquitoes. The only downside from my perspective (other than the blood-sucking insects) was that propagation from this side of the island was only unobstructed toward South America and the southern Pacific. (A volcano blocked propagation towards North America, making QSOs in that direction particularly difficult.)

My first stint on the air was from the Black Sands Beach near Naalehu on Christmas Eve morning. WWV reported that the solar flux was 71. Sunspot conditions may not have been great, but I was ready for action. I set up the fiberglass-supported vertical on the beach about 10 feet from the water with the station situated under a shady tree. The SWR was 1.2:1 at 14 MHz, so no need to activate the internal antenna tuner. Perfect!

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[1] This Landsat image is public domain and available from NASA.

The author, KH6/K6EI, with his KX3 on Christmas Eve morning calling CQ from Black Sand Beach. (The vertical antenna is visible near the water line in the far left of the upper photo.)

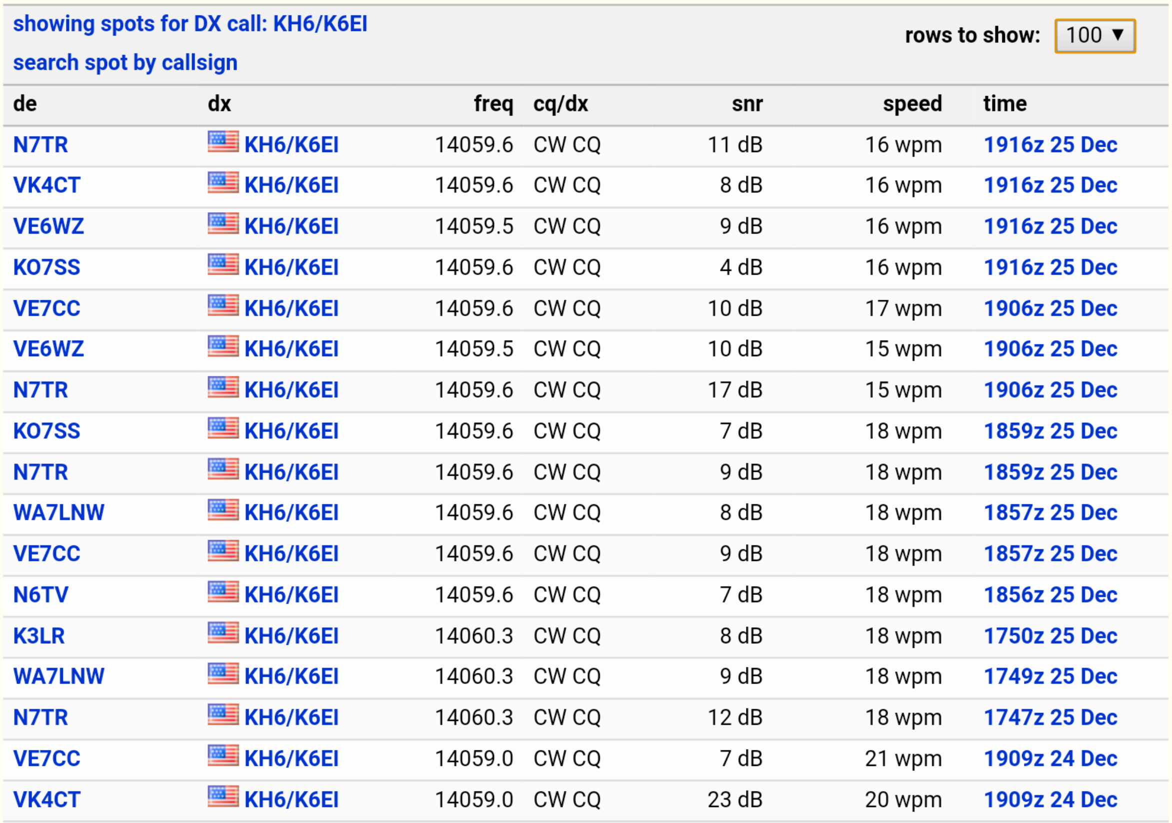
Naturally, it didn't take long for Murphy to appear. I could hear plenty of US stations, but my 10 watt signal – partially blocked by the volcano – was not getting through. And a few calls of CQ rapidly depleted the eight rechargeable AA batteries internal to the KX3. Almost immediately, the rig's "low battery" warning started beeping.   And so after a half hour I packed up and returned to our inland rental cottage.

Christmas morning, I set up the vertical on the lawn next to our rental cottage a couple miles inland. This time I used AC power instead of the rig's internal battery. After a few minutes of effort, I was able to make a CW contact with a KL2AX/5 in Texas who gave me a generous RST of 529.

My vertical antenna set up for 20 meters next to our rental cottage a couple miles from the beach on Christmas morning. (The two elevated radials are present but difficult to see in this photo.) Needless to say, low elevation angle radiation for long distance propagation for this antenna was nowhere near as impressive as the previous morning on the beach.

The big surprise came later that morning when I logged onto the Reverse Beacon website to check my results. (This website provides real-time signal reports from a network of automated stations monitoring the bands. You can learn more about the Reverse Beacon Network at www.reversebeacon.net.) Even though my Christmas Eve CQs from the beach hadn't resulted in any contacts, the Reverse Beacon Network indicated that my 10 watt signal had been detected. My signal from the beach was reported by a station in Australia (VK4CT) to be 23 dB above the noise floor.

In contrast, my signal Christmas morning from the yard of our rental cottage was reported by the same Australian station to only be 8 dB above the noise floor. Since the solar flux was the same both days, this implied that radiating a vertically-polarized signal next to the salt water had resulted in approximately 15 dB of additional gain at low elevation angles – very cool! Both signal reports occurred around 9am local time in Hawaii with the solar flux both days reported to be 71. Since both signal reports involved the same antenna, the same solar conditions, and the same time of day, the only difference was the presence of salt water versus lawn. Given that I was on the air both days at 1900Z (5 am local time in Sidney) it isn't a surprise that there weren't many Australians to respond to my CQs.



de	dx	freq	cq/dx	snr	speed	time
N7TR	KH6/K6EI	14059.6	CW CQ	11 dB	16 wpm	1916z 25 Dec
VK4CT	KH6/K6EI	14059.6	CW CQ	8 dB	16 wpm	1916z 25 Dec
VE6WZ	KH6/K6EI	14059.5	CW CQ	9 dB	16 wpm	1916z 25 Dec
KO7SS	KH6/K6EI	14059.6	CW CQ	4 dB	16 wpm	1916z 25 Dec
VE7CC	KH6/K6EI	14059.6	CW CQ	10 dB	17 wpm	1906z 25 Dec
VE6WZ	KH6/K6EI	14059.5	CW CQ	10 dB	15 wpm	1906z 25 Dec
N7TR	KH6/K6EI	14059.6	CW CQ	17 dB	15 wpm	1906z 25 Dec
KO7SS	KH6/K6EI	14059.6	CW CQ	7 dB	18 wpm	1859z 25 Dec
N7TR	KH6/K6EI	14059.6	CW CQ	9 dB	18 wpm	1859z 25 Dec
WA7LNW	KH6/K6EI	14059.6	CW CQ	8 dB	18 wpm	1857z 25 Dec
VE7CC	KH6/K6EI	14059.6	CW CQ	9 dB	18 wpm	1857z 25 Dec
N6TV	KH6/K6EI	14059.6	CW CQ	7 dB	18 wpm	1856z 25 Dec
K3LR	KH6/K6EI	14060.3	CW CQ	8 dB	18 wpm	1750z 25 Dec
WA7LNW	KH6/K6EI	14060.3	CW CQ	9 dB	18 wpm	1749z 25 Dec
N7TR	KH6/K6EI	14060.3	CW CQ	12 dB	18 wpm	1747z 25 Dec
VE7CC	KH6/K6EI	14059.0	CW CQ	7 dB	21 wpm	1909z 24 Dec
VK4CT	KH6/K6EI	14059.0	CW CQ	23 dB	20 wpm	1909z 24 Dec

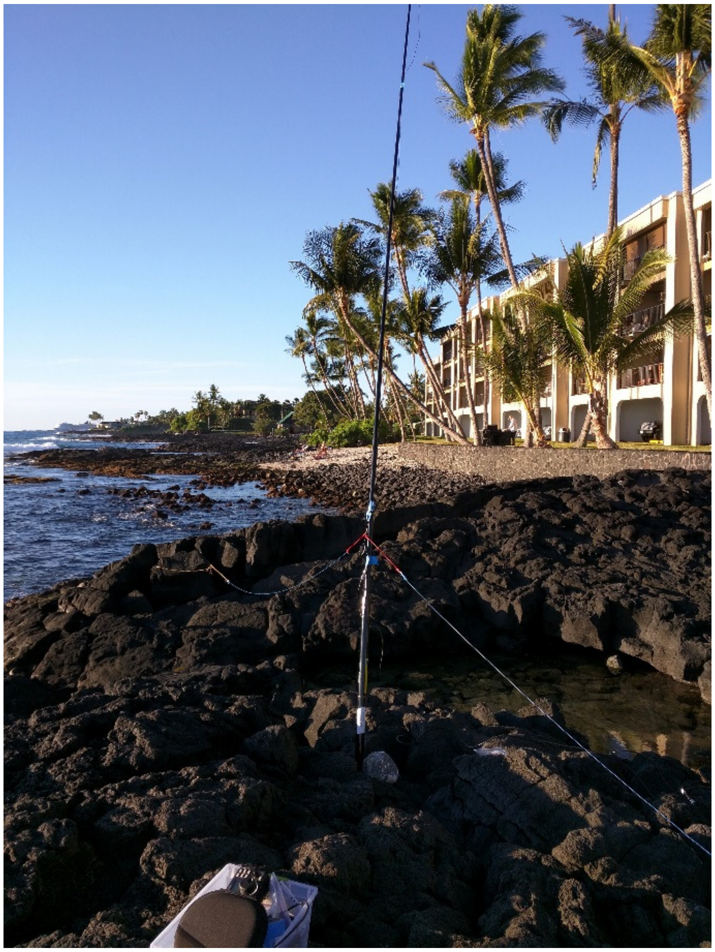
Reverse Beacon signal reports for my station (KH6/K6EI) on Christmas Eve (from Black Sand Beach) and Christmas morning (from a mile inland). Being adjacent to sea water boosted my vertically-polarized signal to an Australian monitoring station (VK4CT) by 15 db.

The Adventure Continues on Hawaii's west coast

The last portion of our trip was on the west side of the Big Island near Kona. In contrast to the south side, this part of the island is heavily populated with lots of resorts. Once again, a volcano blocked propagation towards North America, but the great news was that we were staying in a beachfront condo with a clear view to the west.

Since the beach was adjacent to the condo were we were staying, I dashed over to Walmart and bought a 100 foot roll of AC extension cord (in camouflage green, of course) to avoid any further low battery headaches. With just 48 hours left to our stay, I was determined to make the most of the time available.

Recognizing that the other guests at the resort might not appreciate having their ocean views marred by my sky hook, my approach was to deploy the fiberglass pole shortly before sunset and bring it down mid morning.



My vertical antenna set up for 20 meters on the beach at Kona. (The two elevated radials are present but difficult to see in this photo.) At high tide, the salt water gave the low angle portion of my signal a real boost to the west. Several passers-by stopped to ask me what type of fish I was going after with my 30 foot "fishing pole".

Given the low sunspot numbers, propagation to the west on 20 meters near sunset was pretty meager. I could hear an Asiatic Russian (UA0UZ), but he couldn't hear me. And my sunset CQs were not picked up by any of the Reverse Beacon monitoring stations. So I called it a night.

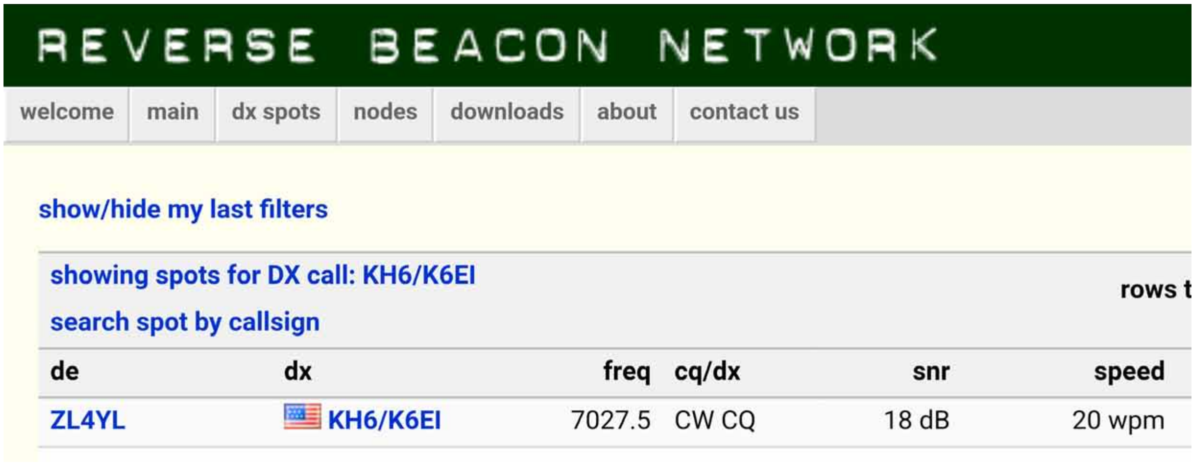
The next morning I had better luck, making 2-way contact with VK5CZ around 10am (which was 6am at his location in Clare, Australia.) Once again, my 10 watt signal was given a 529 signal report – pretty weak, but good enough. I was thrilled!

Having proven to myself that I could work DX on 20 meters, the final step was to see what was possible on 40. I replaced the 14 MHz wire assemble with my 7 MHz wires. For some reason, the antenna which had been 1.2:1 in California was now closer to 3:1. This was likely due to the dramatic differences in ground conditions adjacent to the antenna. Fortunately, the KX3's internal antenna tuner could handle this without a hitch.

Given that 7 MHz is primarily a nighttime band, I got up well before sunrise and was on the beach calling CQ in the dark around 6am. I could hear a ham in Vietnam (XW3DT) but my barefoot KX3 wasn't enough to enable me to break through the small pile-up of stations that were also calling him.

I knew I was ideally situated for contacts with Australia and New Zealand, but sunrise on Hawaii corresponds to 2am on that side of the globe. (Every sane Kiwi and Aussie was probably sound asleep.) After 30 minutes of fruitless CQs, the sun came up and I prepared to take down my antenna. It was only then that I realized that one of my two elevated radials had been knocked down and rolled up by a passerby during the night. No wonder I couldn't be heard! I finished dismantling my station and packed my bag for our dash to the airport and our flight home.

Before departing for the airport, I took a final glance at the Reverse Beacon Network and was quite surprised to see that my sunrise 40 meter signal (from my partially-disabled antenna) had been detected in New Zealand at 18 db above the noise floor. Not bad for 10 watts and a simple wire antenna on 40 meters!



showing spots for DX call: KH6/K6EI

search spot by callsign

de	dx	freq	cq/dx	snr	speed
ZL4YL	KH6/K6EI	7027.5	CW CQ	18 dB	20 wpm

Reverse Beacon signal reports for my station (KH6/K6EI) from the beach at Kona. Being adjacent to sea water undoubtedly enhanced my vertically-polarized 40 meter signal toward New Zealand (resulting in an 18 dB SNR) , even if there was no one awake in that region to respond.

Bottom line: You don't need to be part of a mega-DXpedition in order to travel to an exotic location for your own radio adventure. I may not have created any pile-ups during my personal mini-DXpedition to Hawaii's Big Island, but I had a boatload of fun and learned a bit more about the effectiveness of low power when combined with vertical polarization and a vast expanse of salt water. The only remaining question is where will I go with my KX3 next?

Flea Market moving on April 14

Hello everyone,

I don't think it has been posted here yet but for anyone who plans to attend the Electronics Flea Market in April, the location has changed.

The Association of Silicon Valley Amateur Radio Organizations is an umbrella group that negotiates on behalf of all of the clubs in the valley for space for the flea market.

An agreement has been reached to move the Flea Market to the parking lot of Fry's Electronics on Arques Avenue in Sunnyvale on SATURDAY, APRIL 14.

PLEASE NOTE: THIS IS NOT YET A PERMANENT CHANGE. After the April activity, Fry's and ASVARO will discuss whether this change should be made permanent or whether the Flea Market will return to De Anza College.

LOCATION: Fry's Electronics, 1077 E. Arques Ave, Sunnyvale
nearest cross street: Santa Trinita Avenue
this is WEST of Lawrence Expressway
your GPS and map program are aware of the location

DATE: Saturday, APRIL 14, 2018

TIME: approximately 5 a.m. to noon

WEB SITE: http://www.electronicsfleamarket.com/

Feel free to forward this announcement to others who may be interested. It should go without saying that if anybody has any QUESTIONS, they should check the web page as shown.

73,
Dave Schultheis, WB6KHP

Treasurer’s Report (Peri Frantz, KI6SLX)

Here’s the Activity Report for January & February, with a column added for the budget we approved in February. Also, a Position Statement as of the end of February. Nothing has changed since then. We have a net worth of 11,851.01 split between the Repeater Fund (3,128.63) and the Association (8,586.40), plus 2018 gain to date (135.98) which will not be split between the funds until the end of the year. This is a more than sufficient reserve from which we can pay expenses in advance of the offsetting income.

The year is off to a good start. Dues collections are ahead of the budget (1/6 of budget = 233.33) , even though many members paid their 2018 dues at the end of 2017. We will begin collecting 2019 dues in the 4th qtr of 2018 (Oct-Dec), which will boost this year’s income. If you have not paid your 2018 dues yet please do so either on the website (https://wvara.org/wordpress/membership/) or at the March Meeting - see the WVARA home page for details.

Our major expense so far this year was in January, when we paid for the new club mugs. We expect to recoup this expense over time, as we sell mugs, although we will reserve a bunch for use as gifts to speakers. If you signed up for a mug, and have not paid for or received it yet, Bobby (K0IX) will be bringing them to the March meeting. You can complete your transaction there. I will have a list of who still owes at the meeting.

Last year we received and paid the bill for participation in the DeAnza Flea market, in February, which skewed our activity results for several months. I have not received the 2018 bill yet, although I may get it at the March Meeting, with a similar effect. I should also note that Bill and I will be out of town, attending to family business, on August 11, our assigned Flea Market Day. I’m sure that Greg (N6GD), Svend (KF6EMB), and others can carry on without me. If you can volunteer to help with this effort, contact Greg. Contact info is on the club roster, accessible via the membership page. If you need credentials, send a request to Treasurer@wvara.org. The BOD has observed that due to rising expenses, our anticipated gain from the Flea Market ($850 in 2018) is now under a grand, and has begun asking at what level it becomes not worth the effort. If you have an opinion, let one of the directors know.

Peri Frantz, KI6SLX
WVARA Treasurer
treasurer@wvara.org

WVARA

Statement of Activity with approved budget

Printed 03/08/18

January through February 2018

	Jan '18	Feb '18	TOTAL	2018 Budget Approved	Budget Notes
Income					
4100 — Program Income					
4110 — Membership Dues					
4111 — Indiv. Assn. ($15)	117.00	15.00	132.00		Individual dues categories
4112 — Indiv. Repeater (12)	48.00	12.00	60.00		not budgeted
4113 — Fam. Assn. ($20)	100.00	0.00	100.00		
4114 — Fam. Repeater ($18)	90.00	0.00	90.00		
Total 4110 — Membership Dues	355.00	27.00	382.00	1,400.00	Only Total Dues budgeted
4150 — Flea Market Reciepts				3,500.00	
Total 4100 — Program Income	355.00	27.00	382.00	4,900.00	
4200 — Misc. Income					
4210 — Mug Sales	120.00	0.00	120.00		
4200 — Misc. Income - Other	0.04	0.00	0.04		
Total 4200 — Misc. Income	120.04	0.00	120.04	0.00	
4800 — Donations	100.00	0.00	100.00	400.00	
Total Income	575.04	27.00	602.04	5,300.00	
Expense					
5300 — Flea Market Expenses				2,650.00	
5200 — Membership Expenses					
5240 — Summer Picnic				90.00	
5230 — Holiday Party				500.00	
5210 — Badges				125.00	
5220 — Meeting Expenses				25.00	
Total 5200 — Membership Expenses				740.00	
5100 — Administrative Expenses					
5110 — Finance Fees Paid	5.61	1.08	6.69	50.00	
5120 — Insurance				360.00	
5140 — Web Hosting Expense	0.00	59.40	59.40	100.00	
5150 — PO Box Rental				70.00	
5160 — Officer Awards				40.00	
5190 — Misc. Expense	400.00	0.00	400.00	35.00	
Total 5100 — Administrative Expenses	405.61	60.48	466.09	655.00	
5500 — Program Expenses					
5520 — Field Day Expenses				500.00	
5530 — CQP Expenses				25.00	
Other Contests @ 25/per				100.00	
5590 — Misc. Program Expenses				200.00	
Total 5500 — Program Expenses				825.00	
6000 — Repeater Expenses					
6100 — Repeater Maintenance				350.00	
6200 — NARCC dues				20.00	
Total 6000 — Repeater Expenses				370.00	
Total Expense	405.61	60.48	466.09	5,240.00	
Net Income	169.43	-33.48	135.95	60.00	
Activity subtotals					
Flea Market					
Income	0.00	0.00	0.00	3,500.00	
Expenses	0.00	0.00	0.00	2,650.00	
Net Flea Market Gain	0.00	0.00	0.00	850.00	
Repeater					
Income	138.00	12.00	150.00	549.74	Extrapolated Income:
Expenses	0.00	0.00	0.00	370.00	
Net Gain	138.00	12.00	150.00	179.74	
Association					
Income	437.04	15.00	452.04	4,750.26	
Expenses	405.61	60.48	466.09	4,870.00	
NetGain/-loss	31.43	-45.48	-14.05	-119.74	

WVARA	Report Printed
Statement of Position	03/10/18
As of February 28, 2018	
	Feb 28, '18
ASSETS	
Current Assets	
Checking/Savings	
1000 — Financial Accounts	
1200 — Savings; BotW	4,495.49
1300 — Paypal	2,734.76
1100 — Checking; BotW	4,472.53
1399 — Petty Cash	
1910 — Petty Cash	148.23
Total 1399 — Petty Cash	148.23
Total 1000 — Financial Accounts	11,851.01
Total Checking/Savings	11,851.01
Total Current Assets	11,851.01
TOTAL ASSETS	11,851.01
LIABILITIES & EQUITY	
Equity	
3300 — Unrestricted Net Assets	
3320 — Repeater Balance	3,128.63
3310 — Associaton Balance	8,586.40
Total 3300 — Unrestricted Net Assets	11,715.03
Net Income to date 2018	135.98
Total Equity	11,851.01
TOTAL LIABILITIES & EQUITY	11,851.01

2018 West Valley Amateur Radio Association Board

President: Bobby Barnett, K0XI
Vice President: Bill Fehring, W9KKN
Secretary: Jon Kelley, K6WV
Treasurer: Peri Frantz, KI6SLX
Directors:
Bill Frantz, AE6JV, Outgoing President
Jim Peterson, K6EI, 2017-2018
Svend Jensen, KF6EMB, 2017-2018
Kevin Smith, KK6VF, 2017-2018
Chuck Kamas, AD6CL, 2018-2019
John Glass, NU6P, 2018-2019
Dave Schultheis, WB6KHP, 2018-2019

The Heterodyne is published monthly by the West Valley Amateur Radio Association and sent to all club members via the web. Please obtain permission from the author to re-publish any article in this publication.

Club Web Page: http://www.wvara.org
Heterodyne Editor: Phil Verinsky, W6PK
Internet Postmaster: Phil Verinsky, W6PK
Meeting Refreshments: Kevin Smith, KK6VF
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John Glass, NU6P
Scott Emery, AD6RY
Jim Peterson, K6EI
Jon Kelley, K6WV
Phil Verinsky, W6PK

DX Special Interest Group:
Dennis Lyden, AG6HE

Club address:
West Valley Amateur Radio Assn
P.O. Box 6544
San Jose, CA 95150-6544